

DETAILED ACTION

1. This action is in response to the amendment filed on July 28, 2008. Claims 1-19 and 24-25 are pending and have been considered below.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Keith M. Mullervy on September 25, 2008.

The Claims in the application has been amended as follows.

In Claims:

- (1) In claim 1, line 7; replace – **the** – between "**computing**" and "**inverse**" with - **an** -.
- (2) In claim 1, line 7; replace – **the** – between "**represents**" and "**common**" with - **a** -.
- (3) In claim 1, line 13; replace – **the** – between "**of**" and "**inverse**" with - **an** -.
- (4) In claim 1, line 15; replace – **the** – between "**of**" and "**channel**" with - **a** -.
- (5) In claim 11, line 8; replace – **the** – between "**compute**" and "**inverse**" with - **an** -.

(6) In claim 11, line 9; replace – **the** – between “**represents**” and “**common**” with - **a** -.

(7) In claim 11, line 15; replace – **the** – at the end of the line with - **an** -.

(8) In claim 11, line 17; replace – **the** – at the end of the line with - **a** -.

(9) In claim 24, line 8; replace – **the** – between “**computing**” and “**inverse**” with - **an** -.

(10) In claim 24, line 8; replace – **the** – at the end of the line with - **a** -.

(11) In claim 24, line 15; replace – **the** – between “**of**” and “**inverse**” with - **an** -.

(12) In claim 24, line 17; replace – **the** – between “**of**” and “**channel**” with - **a** -.

(13) **Cancel** Claim 25.

Allowable Subject Matter

3. Claims 1-19 and 24 are allowed.

4. The following is an examiner’s statement of reasons for allowance: Prior art of record discloses a method for a channel equalizer for estimating interference from a received signal at a first time, creating an inverse matrix and a Cholesky matrix and generating an output of the channel equalizer from information of the inverse matrix of the second covariance matrix. But prior art fails to disclose teach or suggest computing the inverse of a sub-matrix, which represents the common part of the first covariance matrix and a second covariance matrix, which includes covariance estimates of a second observation time, by using the aid of the Cholesky decomposition of the inverse matrix of the first covariance matrix and creating the Cholesky decomposition of the

inverse matrix of the second covariance matrix by using unitary rotations. It would not have been obvious to a person of ordinary skill in the art to reach at the claimed invention to combine teachings of prior art at the time of invention, therefore, the claims are patentable over the prior art references.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Choi et al. (6,941,123) discloses a system and method for obtaining diversity gain in wireless communication, for interference eliminating using cholesky matrix calculation.
 - b. Kansanen et al. (US 2005/0175131) discloses a system and method for processing data in a receiver for interference calculation by means of inverting the the covariance matrix.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HIRDEPAL SINGH whose telephone number is (571) 270-1688. The examiner can normally be reached on Mon-Fri (Alternate Friday Off) 8:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. S./
Examiner, Art Unit 2611
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611